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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/613,561 | 07/03/2003 | Thomas K. Gaskin | ADVF:039 10041.0039.NPUS0 | 6614 |
| 7590 12/17/2004 Raymond Reese HOWREY SIMON ARNOLD & WHITE, LLP 750 Bering Drive Houston, TX 77057-2198 | | | EXAMINER LAWRENCE JR, FRANK M | |
| | | | ART UNIT 1724 | PAPER NUMBER |

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,561

Applicant(s)

GASKIN, THOMAS K.

Examiner

Frank M. Lawrence

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 13 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6, 8-12 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Gazzi et al. (4,971,607).

3. Gazzi et al. '607 teach a system for separating the components of a multi-component gas stream, comprising counter-currently contacting the stream with an external aromatic solvent in an absorber (4) containing contact trays, producing an overhead stream enriched in unabsorbed methane and a rich solvent bottoms stream that is enriched in acid gases and contains methane, flashing the bottoms stream in a separator (12) to regenerate lean solvent and produce an overhead stream enriched in methane, recycling the regenerated lean solvent through piping to the absorber, compressing the overhead methane, and recycling the methane through piping to the absorber at a point below where the multi-component gas stream enters (figure 1, col. 1, lines 11-17, col. 5, line 62 to col. 6, line 25, claim 1).

4. Claims 1-5, 8-11 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mehra (4,832,718).

5. Mehra '718 teaches a system for separating the components of a multi-component gas stream, comprising counter-currently contacting the stream with an external aromatic or paraffinic solvent in an absorber (30) containing contact devices, producing an overhead stream

enriched in unabsorbed nitrogen or hydrogen and a rich solvent bottoms stream that is enriched in methane, flashing the bottoms stream in a separator (42) to regenerate lean solvent and produce an overhead stream enriched in a desorbed gas, recycling the regenerated lean solvent through piping to the absorber, compressing the overhead desorbed gas, and recycling the desorbed through piping to the absorber (figures 2, 6, col. 1, lines 39-46, col. 13, lines 11-30, claim 1).

6. Claims 1-3, 7, 8, 10, 11 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill (2,327,187).

7. Hill '187 teach a system for separating the components of a multi-component gas stream, comprising counter-currently contacting the stream with a solvent comprising heavy oil from the stream or from an external source (134) in an absorber (94) containing contact trays, producing an overhead stream enriched in lighter gases and a rich solvent bottoms stream that is enriched in heavier hydrocarbons, flashing the bottoms stream in a separator (113) to regenerate lean solvent and produce an overhead stream enriched in a desorbed gas, recycling the regenerated lean solvent through piping to the absorber, compressing the overhead desorbed gas, and recycling the desorbed through piping to the absorber (figure 2, page 4, col. 1, line 10 to col. 2, line 7).

Allowable Subject Matter

8. Claims 13 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose separation systems for multi-component gas mixtures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence
Primary Examiner
Art Unit 1724

Frank Lawrence
11-16-04

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